

Potential Regulatory Approaches for Portable Diesel-Fueled Engines

The following provides the pros and cons for various regulatory approaches.

1. Current Program

A. New Engines:

- i. Maintain existing approach to implement the certification standards currently adopted and being developed by the Air Resources Board's Mobile Source Control Division.

Pros:

- Consistent with U.S. E.P.A. standards.
- Consistent with state standards.
- Forces engine manufacturers to meet established emissions level instead of the end user.

Cons:

- Long term strategy, no immediate emissions reductions.
- No immediate change in localized health risks.

B. Existing Engines:

- i. After January 1, 2010, any engine not previously meeting a federal or California standard pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations shall meet the most stringent emissions standard.

Pros:

- Reduces PM, NO_x, CO, HC emissions.
- Removes older engines from the California fleet.

Cons:

- May force owners to replace engines before the end of the engine's useful life.
- Long term strategy, no immediate emissions reductions.
- May increase costs to the end user.
- Does not address PM for some engines.

- ii. By January 1, 2005, all engines operated on a dredge, shall meet the most stringent emission standard pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations.

Pros:

- Consistent with U.S. E.P.A. standards.
- Consistent with state standards.

- Reduces PM, NOx, and CO emissions.

Cons:

- PM retrofits are not required.
- May force owners to replace engines before the end of the engine's useful life.

2. Potential Revisions to Existing Program

A. New Engines:

- i. No change.

B. Existing Engines:

- i. Revise the January 1, 2010 to an earlier date that will require any engine not previously meeting a federal or California standard pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations meet the most stringent emissions standard.

Pros:

- Reduces PM, NOx, CO, HC emissions.
- Removes older engines from the California fleet.

Cons:

- Forces owners to replace engines before the end of the engine's useful life.
- Increases costs to the end user.

- ii. Establish PM standard and date for all engines.

Pros:

- Significantly reduces PM emissions from all engines.

Cons:

- May not be technologically feasible for some applications.
- May not be cost effective for some applications.
- May force owners to replace engines before the end of the engine's useful life.
- May increase costs.

- iii. Identify specific engine categories where technologies, fuels, and infrastructure allow the use of retrofit technologies.

Pros:

- Significant PM reductions.

- Significant reductions in localized health risks.

Cons:

- May have high costs.
- May not be technologically feasible for some applications.
- May not be cost effective for some applications.

- iv. Certain categories may continue to pose significant health risks after the application of retrofit controls. Staff may evaluate hour restrictions to further reduce the risk.

Pros:

- Significant PM reductions.
- Significant reductions in localized health risks.

Cons:

- May have high costs.
- Could have significant impacts on the ability to operate some engines.

- v. Public health may be better protected moving some engine categories to local air district or ARB stationary permitting programs.

Pros:

- Significant PM reductions.
- Significant reductions in localized health risks.
- Evaluate impacts of site specific locations

Cons:

- May have high costs.
- Time to acquire needed approvals (permits) may be greater.
- Requirements could vary from district to district.

- vi. Electrification/alternative fuels may be considered for some applications and categories.

Pros:

- Significant emissions reductions.
- Significant reductions in localized health risks.

Cons:

- May have high costs.